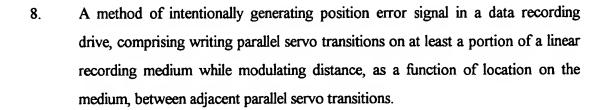
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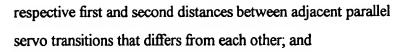
I claim:

- A linear recording medium, comprising a series of parallel servo transitions having modulated distances between adjacent parallel servo transitions as a function of location of the transitions on the medium.
- 5 2. The medium of claim 1, in which the adjacent parallel servo transitions are immediately adjacent.
 - 3. The medium of claim 1, in which the linear recording medium is a magnetic recording medium.
- 4. The medium of claim 1, in which the linear recording medium is a tape recording medium.
 - 5. A system for intentionally generating position error signal in a data recording drive, comprising in combination:
 - a) a linear recording medium, upon at least a portion of which are parallel servo transitions, having modulated distances between adjacent parallel servo transitions as a function of location on the medium; and
 - a servo read head connected to the drive;
 in which the drive is designed to expect essentially no modulated distance between
 adjacent parallel servo transitions on the medium.
- 20 6. The system of claim 5, in which the adjacent parallel servo transitions are immediately adjacent.
 - 7. The system of claim 5, in which the speed of the linear recording medium relative to the servo read head is constant.



- 5 9. The method of claim 8, in which the adjacent parallel servo transitions are immediately adjacent.
 - 10. The method of claim 8, in which writing comprises adjusting clock timing in a servo write head timing circuit.
- The method of claim 8, in which writing comprises adjusting position of the linear recording medium relative to a fixed servo write head.
 - 12. The method of claim 8, in which writing comprises adjusting position of a servo write head relative to the linear recording medium.
 - 13. The method of claim 8, in which the method comprises generating position error signal in a step response pattern.
- 15 14. The method of claim 8, in which the method comprises generating position error signal in a pulse response pattern.
 - 15. The method of claim 8, in which the method comprises generating position error signal in a frequency response pattern.
- A method of measuring step response of a servopositioning system in a recording drive designed to expect essentially no modulation of distance between adjacent parallel servo transitions on a linear recording medium, comprising:
 - a) at first and second longitudinal locations on the medium, writing respective first and second parallel servo transitions that have

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- b) reading position error signal at each longitudinal location.
- 17. The method of claim 13, in which the adjacent parallel servo transitions are immediately adjacent.
 - 18. The system of claim 13, in which the position error signal is read while the linear recording medium moves relative to the servo read head at constant speed.
 - 19. The method of claim 13, in which writing comprises adjusting clock timing in a servo write head timing circuit.
- 10 20. The method of claim 13, in which writing comprises adjusting position of the linear recording medium relative to a fixed servo write head.
 - 21. The method of claim 13, in which writing comprises adjusting position of a servo write head relative to the linear recording medium.
- 22. A method of simulating rapid transient motion of a linear recording medium, comprising:
 - a) at a first transverse location on the medium, writing parallel servo transitions on at least a portion of the medium while modulating distance, as a function of location on the medium, between adjacent parallel servo transitions; and
 - b) repeating the writing step at a second transverse location.
 - 23. The method of claim 22, in which the adjacent parallel servo transitions are immediately adjacent.
 - 24. The method of claim 22, further comprising moving the linear recording medium relative to a servo read head of a recording drive at constant speed.

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- 25. The method of claim 22, in which writing comprises adjusting clock timing in a servo write head timing circuit.
- 26. The method of claim 22, in which writing comprises adjusting position of the linear recording medium relative to a fixed servo write head.
- 5 27. The method of claim 22, in which writing comprises adjusting position of a servo write head relative to the linear recording medium.
 - 28. The method of claim 22, further comprising reading position error signal at each transverse location with a recording drive, and disabling a data write function in the drive if the position error signal exceeds a stop write limit.
- 10 29. A method of evaluating performance of a linear recording drive designed to expect essentially no modulation of distance between adjacent parallel servo transitions on a linear recording medium compatible with the drive, comprising
 - a) providing a medium having a series of parallel servo transitions
 having distances between adjacent parallel servo transitions which
 have been modulated as a function of location of the transitions on
 the medium;
 - b) using the drive to read position error signal at each transverse location on the medium; and
 - c) comparing the position error signal to an expected value.
- 20 30. The method of claim 29, in which the adjacent parallel servo transitions are immediately adjacent.
 - 31. The method of claim 29, in which the position error signal is read while the linear recording medium is moving at constant speed.

- 32. The method of claim 29, in which writing comprises adjusting clock timing in a servo write head timing circuit.
- 33. The method of claim 29, in which writing comprises adjusting position of the linear recording medium relative to a fixed servo write head.
- 5 34. The method of claim 29, in which writing comprises adjusting position of a servo write head relative to the linear recording medium.